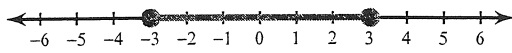


## Absolute Value Inequalities

Date \_\_\_\_\_ Period \_\_\_\_\_

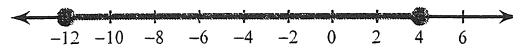
Solve each inequality and graph its solution.

1)  $|6n| \leq 18$



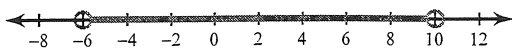
$-3 \leq n \leq 3$

2)  $|p + 4| \leq 8$



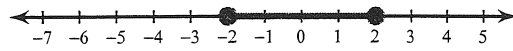
$-12 \leq p \leq 4$

3)  $|m - 2| < 8$



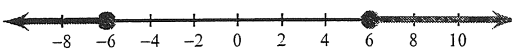
$-6 < m < 10$

4)  $|5x| \leq 10$



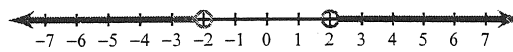
$-2 \leq x \leq 2$

5)  $|x| + 5 \geq 11$



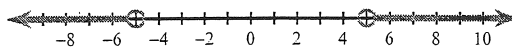
$x \geq 6 \text{ or } x \leq -6$

6)  $|m| - 2 > 0$



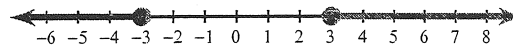
$m > 2 \text{ or } m < -2$

7)  $|r| - 3 > 2$



$r > 5 \text{ or } r < -5$

8)  $|n| + 2 \geq 5$



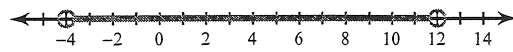
$n \geq 3 \text{ or } n \leq -3$

9)  $|x - 2| - 5 < -2$



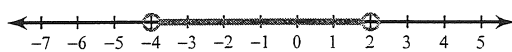
$-1 < x < 5$

10)  $|x - 4| - 3 < 5$



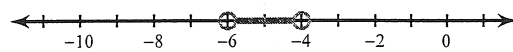
$-4 < x < 12$

11)  $1 + |1 + b| < 4$



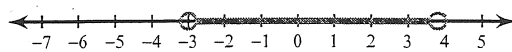
$-4 < b < 2$

12)  $|v + 5| - 6 < -5$



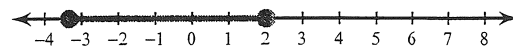
$-6 < v < -4$

13)  $|10p - 4| < 34$



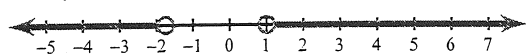
$-3 < p < \frac{19}{5}$

14)  $|6 + 9x| \leq 24$



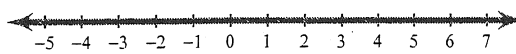
$-\frac{10}{3} \leq x \leq 2$

15)  $|-8a - 3| > 11$



$a < -\frac{7}{4}$  or  $a > 1$

16)  $|1 - 4k| \geq -11$



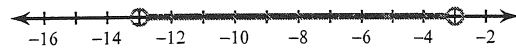
{ All real numbers. }

17)  $9|m - 8| - 10 < 26$



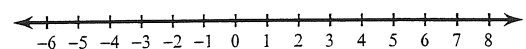
$4 < m < 12$

18)  $9|x + 8| + 10 < 55$



$-13 < x < -3$

19)  $9|r - 2| - 10 < -73$



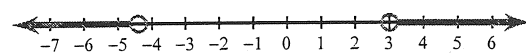
No solution.

20)  $7\left|\frac{n}{3}\right| - 9 < 12$



$-9 < n < 9$

21)  $2|10b + 7| - 1 > 73$



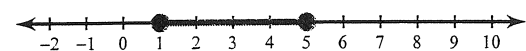
$b > 3$  or  $b < -\frac{22}{5}$

22)  $7 + |6v + 7| \leq 60$



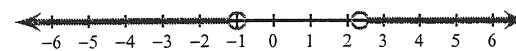
$-10 \leq v \leq \frac{23}{3}$

23)  $4|6 - 2a| + 8 \leq 24$



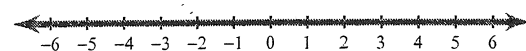
$1 \leq a \leq 5$

24)  $9|3n - 2| + 6 > 51$



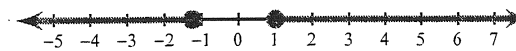
$n > \frac{7}{3}$  or  $n < -1$

25)  $3 + 4|3x + 7| \geq -89$



{ All real numbers. }

26)  $9|1 + 8n| - 3 \geq 78$



$n \geq 1$  or  $n \leq -\frac{5}{4}$